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The Relation between the Eyes
and Disease of the Female
Genital Organs

BY

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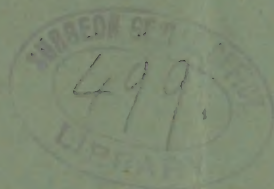
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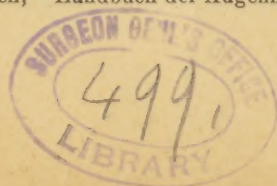
THE RELATION BETWEEN THE EYES AND DISEASE OF THE FEMALE GENITAL ORGANS.¹

I FELT greatly honored to receive the invitation of your committee to address you this evening on the relation of eye troubles to the female genital organs. This subject has engaged the attention of oculists in a desultory manner only. Although the importance of uterine and ovarian disorders as etiological factors in ocular diseases has long been recognized, but few attempts have been made to collect, in a scientific, systematic manner, important data. Scattered throughout ophthalmic literature may be found papers describing all kinds of eye diseases, arising either directly or indirectly from the genital organs, and attributable to near and remote pathological conditions. Förster was perhaps the first to compile a systematic treatise on the relation of diseases of the eye and diseases of the body in general. In his work² he devotes a chapter to the subject engaging our attention this evening. Next comes the work of the Italian oculist Rampoldi, published in 1885. Jacobson, too, calls attention to this subject in "*Beziehungen der Veränderungen und Krankheiten des Sehorgans zu allgemeine Leiden und Organerkrankungen.*" Salo Cohn also calls attention to this subject in "*Uterus und Auge,*" Wiesbaden, 1890. Another more recent and complete work of a similar nature, "*Les Maladies des Jeux dans leurs Rapports avec la Pathologie générale,* par le Dr. Émile Berger," was published in 1892; and a most excellent work is that of Knies, which appeared only a few weeks ago in Germany. These writers aim but to give a general résumé of the subject—a course I will follow here to-night, since all we desire to learn is to what extent do the eyes participate in the various disorders treated by gynecologists and obstetricians.

Invasion of disease by continuity of tissue is obviously an im-

¹ Read before the Gynecological Society of Chicago by special request.

² Vol. vii. of Gräfe and Sämisch, "*Handbuch der Augenheilkunde,*" 1877.



possibility. A direct connection, however, between the two sets of organs is found in the nervous, vascular, and lymphatic systems. The sympathetic system, by means of the renal, hypogastric, aortic, and other plexuses, communicates with the abdominal brain; and again, further up, through the carotid plexuses and various ganglia, with the motor nerves of the eye and the optic nerve. The arterial communication is accomplished by the ovarian, uterine, internal iliac arteries, the aorta, internal carotid, and ophthalmic artery and its branches. Many of the ocular disturbances are of a reflex character, as asthenopia due to flexions and versions; many are communicated directly through the vascular system, as metastatic chorioiditis; and, lastly, the great majority are due to general constitutional errors due primarily to diseases of the uterus and ovaries. As instances of the latter I would mention insufficiencies of the ocular muscles and those of accommodation, due to general anemia the result of various organic lesions of the genital organs. I must state here that I heartily indorse the conclusions reached by Knies, who claims that "the importance of diseases of women as the direct cause of ocular disturbances is universally exaggerated." Ordinarily these troubles are the indirect results of general systemic disturbances.

The act of menstruation, both normal and abnormal, has been held accountable for a variety of eye symptoms. Thus a limitation of the field of vision during this period has been observed by Finkelstein, involving also a concentric narrowing of the color zone. The maximum of disturbance is reached on the third or fourth day, to disappear soon after. Exacerbations of acute and chronic troubles may occur at regular monthly intervals. The literature is replete with such instances. Despañol and Trousseau have each described a case of recurrent iritis developing at each menstrual period. Blepharitis, hordeolum, keratitis, herpes, come in this category. Whether the general bodily derangement, or reflex irritation along the sympathetic, is responsible for these phenomena is naturally a matter of conjecture only. Hemorrhages into the retina and vitreous occurring at the time of menstruation, without flow of blood from the uterus, might illogically be called vicarious menstruation. Such a case came under my care some years ago, but, as one eye showed signs of former intra-ocular trouble, I regarded the hemorrhage in the light of a coincidence.

The disorders of menstruation—menorrhagia and metrorrhagia, amenorrhea and dysmenorrhea—also present their quota of eye disturbances. The most frequent of these, however, are hemorrhages either into the tissues of the eye or into the sheaths of the optic nerve and brain. As an apparent result of suppression of menstruation, I have lately seen three cases of retrobulbar neuritis. In one of these both eyes were affected at two different periods; in the other cases but one eye suffered. The first one is of so remarkable a nature that you will pardon me if I relate it.

A lady, age 40, visited me a year ago, complaining of the gradual loss of vision in two days. She barely discerned fingers close to her face. The peripheric vision was better; movements of the eye and pressing of the eyeball into the socket were followed by pain. The ophthalmoscopic appearance was negative. The woman attributed the trouble to suppression of menstruation induced by exposure to cold. Hot vaginal douches and sitz baths brought on the menses. After a period of five weeks the acute retrobulbar neuritis subsided with a return of normal vision. A year later the same complaint, loss of vision (acute retrobulbar neuritis), occurred to the other eye, induced by the same cause, suppression of menses. The outcome will not be so favorable this time, as the optic nerve shows signs of atrophy.

Hematemesis and copious bleeding from the rectum, as well as severe hemorrhages, such as occur after delivery, result in amblyopia and amaurosis.

The so-called nervous or reflex errors readily follow in the train of the numerous subacute and chronic inflammations of the uterus, as metritis, endo- and parametritis. Flexions and versions of the uterus, diseases of the ovaries, are also exciting causes. Förster describes at great length a complex of symptoms, reflex hyperesthesia of the fifth and optic nerves, under the name of *kopiopia hysterica*. Pains, various in character and degree, in the eyeball and surrounding regions, accompanied by photophobia and slight conjunctival irritation; functional disturbances of the ocular muscles, frequently without any local, abnormal, objective condition, associated with all the marked general disturbances prevailing in hysterical individuals, complete this picture of reflex disease, which sometimes has also been observed in males. This array of symptoms is attributed

to a chronic inflammation of the nerve-bearing connective tissue surrounding the uterus—in other words, to a chronic atrophic parametritis. To Prof. Freund, of Breslau, is given the credit of having first recognized this disease, which he substantiated during a period of fourteen years by numerous post-mortem sections and preparations. In all cases the accompanying eye symptoms were present.

Other reflex phenomena, known as muscular and accommodative asthenopia, are described in this connection. Often the so-called female diseases are the disturbing factors, and I hail, consequently, this propitious occasion to warn you against the overzealous and destructive genius who sees in every case of asthenopia an insufficiency of the ocular recti muscles, and who often partially, and even completely, tenotomizes these innocent tendons.

The number of eye complaints associated with menopause, pregnancy, parturition, and the puerperal condition are quite as numerous as those already referred to. I will mention only the more important ones. Retinitis albuminurica occurring in the latter half of pregnancy is often undoubtedly due to pressure of the enlarged uterus on the kidney, producing a parenchymatous nephritis, or it is caused by mechanical obstruction of the circulation. The toxic effect of the urea and other excrementitious constituents of the urine may later on give rise to puerperal eclampsia. Retinitis albuminurica, characterized by the presence of white spots or lines, usually of a stellate arrangement, about the macula lutea region, may be of so severe a form that great destruction of vision is to be feared.

The prognosis depends, naturally, on the length of gestation. In aggravated cases the induction of premature labor, or even abortion, is the only therapeutic measure.

In an essay on albuminuric retinitis Pooley arrives at the following conclusions:

“1. In all cases of pregnancy, not only should examinations of the urine be systematically made, but the eyes should be examined with the ophthalmoscope, since in a large proportion of cases where eye troubles exist the patients make no complaint of disorders of vision. Frequently such troubles can be detected with the ophthalmoscope long before any disease of the kidney is shown in the urine.

“2. In uremic amaurosis, without changes of the eye visible

to the ophthalmoscope, even should the usual accompanying symptoms, such as dizziness, nausea, and threatened convulsions, be absent, their supervention is soon to be anticipated, and the immediate induction of premature labor is indicated, without waiting until the life as well as the sight of the patient is in danger.

"3. In neuro-retinitis the induction of labor is not only justifiable, but urgently demanded; in some instances called for even in the earlier months of pregnancy.

"4. It is required in cases of eye trouble recurring in successive pregnancies. A woman having once suffered in this way during pregnancy, the relationship of cause and effect should be fully explained both to herself and her husband."

In this connection I might state that retinitis albuminurica occurs in about five per cent of pregnancies.

Many ocular troubles result from long-continued vomiting, as, for instance, hemorrhages into the retina or vitreous; under the conjunctiva, producing subconjunctival ecchymosis; into the brain or optic sheaths, resulting in hemianopsia, amblyopia, and even amaurosis. The improvement frequently occurring in eye troubles and other diseases after pregnancy is accounted for by Knies in the increased power of resorption. Mydriasis has been observed during labor pains, attributable to reflex action along the sympathetic nerves. Severe hemorrhages, due to placenta previa or the removal of adherent after-births, has been followed by hemianopsia, probably the result of embolism of the cerebral arteries consecutive to syncope.

Perhaps the severest complication of puerperal sepsis is metastatic choroiditis. The infection is carried by emboli, which lodge in the choroidal vessels and give rise to choroiditis, resulting either in atrophy of the eyeballs or in complete destruction through panophthalmitis. Fortunately these cases are very rare, thanks to the rigorous antiseptic measures introduced by obstetricians. Only two weeks ago I was called to the German Hospital to examine a poor woman who presented all the symptoms of a metastatic choroiditis following puerperal fever. A short clinical history of the main points may prove interesting. A young woman, age 22, married one year, was delivered with forceps March 15th by a midwife. The patient was admitted into the German Hospital, March 20th, in the following condition: Temperature 105.2°, pulse 144; delirious; extensive laceration of perineum and cervix; in upper third of tibia a

large sinus, from which pus escaped; both eyes exophthalmic; pus in the anterior and vitreous chamber; intense swelling of conjunctiva and lids. The woman died of septic peritonitis a few days later.

It is customary to refer, in a paper like this, to the dangers to which the infant's eyes are exposed during delivery. Fractures of the orbital bones, rupture and other traumatic lesions of the eyeballs, are recounted as the direct result of the application of forceps. So much has been written of blennorrhœa neonatorum that I have not the courage to do more than mention it. The infection, no doubt, usually comes from the mother, although the nurse or the midwife may be the *bête-noir*; at least, Knies affirms that he has met with small epidemics of blennorrhœa among the clientèle of certain midwives. As proof of such an assertion he speaks of children, born in an unruptured membrane, who contracted the disease later on.

The extensive ground I have been obliged to cover precluded the possibility of devoting more than passing attention to any one subject.

My main object, as stated in the opening remarks, was merely to outline briefly the anatomical connection between the eyes and the female genital organs, and to mention the more common ocular complaints accompanying the diseases of the latter.

The only eye disturbances which are regarded as pathognomonic of uterine diseases (atrophic parametritis) are those reflex troubles called by Förster *kopiopia hysterica*, and even these observations have not been verified by later researches.



